Object Modeling, Identification and Authentication/Authorisation

The importance of Standards

Open Scholarly Communities on the Web (OSCW)

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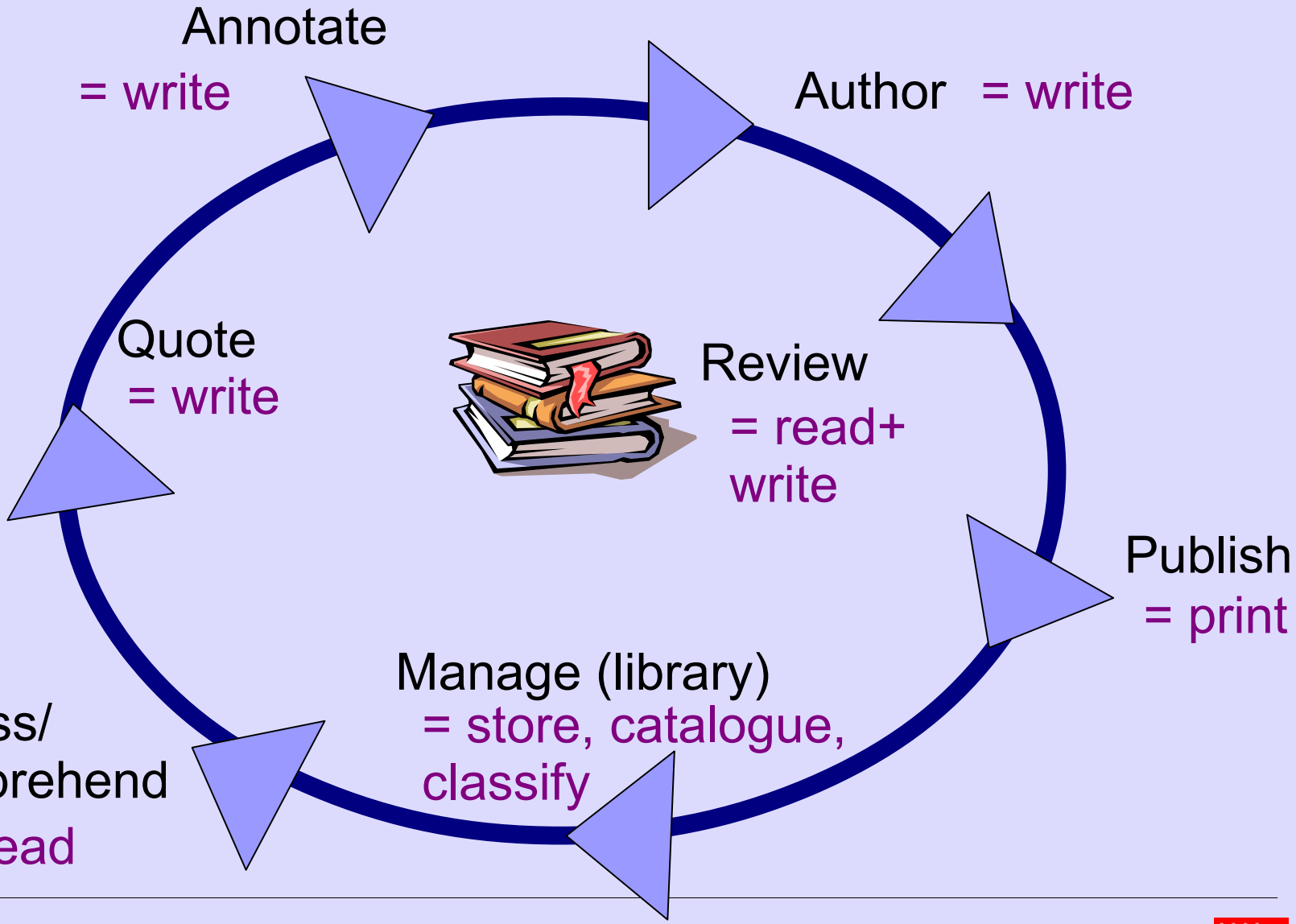
Entremets: 3 major motivations making standards an essential issue for OSCW

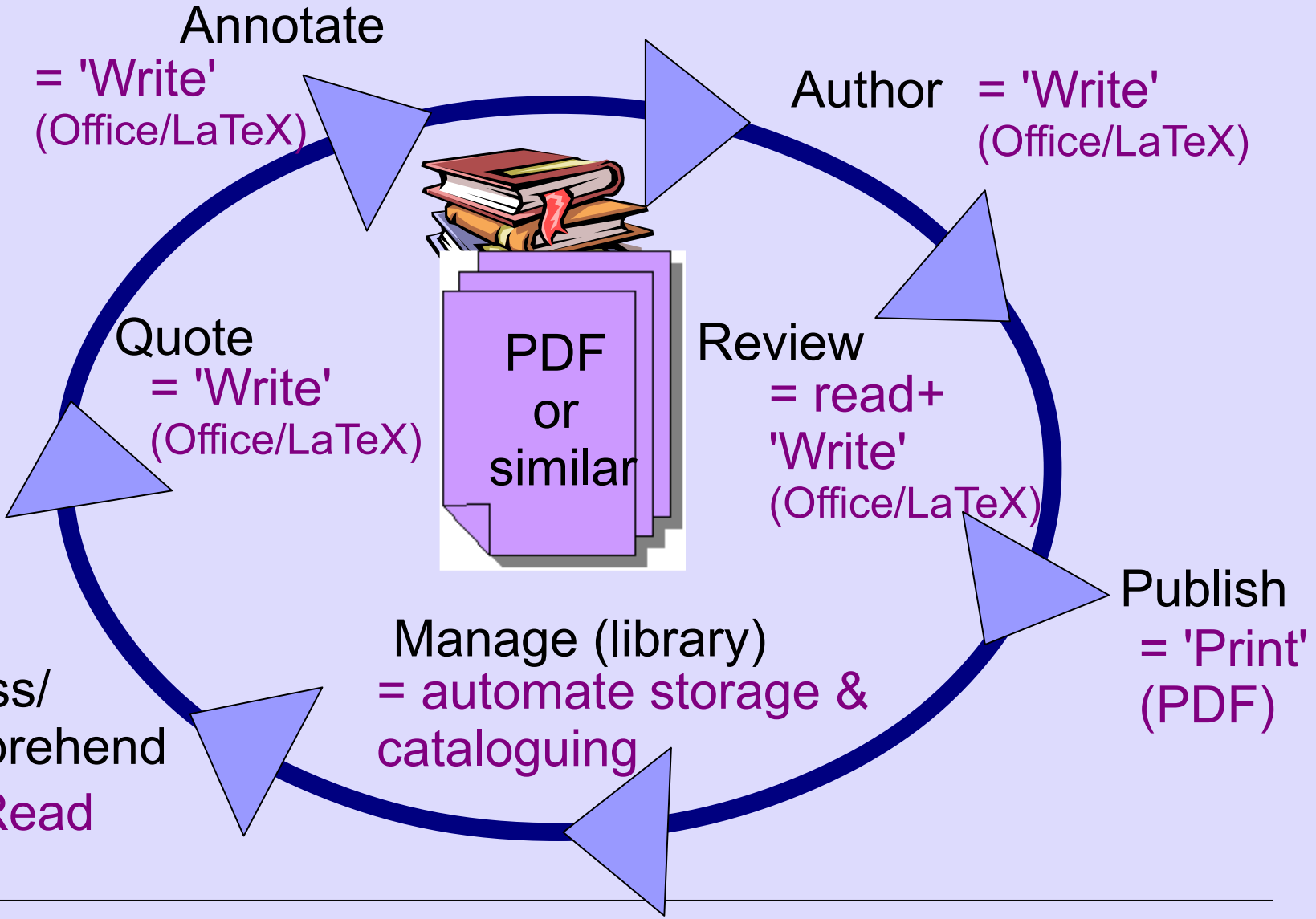
Pièce de résistance: What kind of standards on which level?

Dessert: Standards for the 'WantedTools'

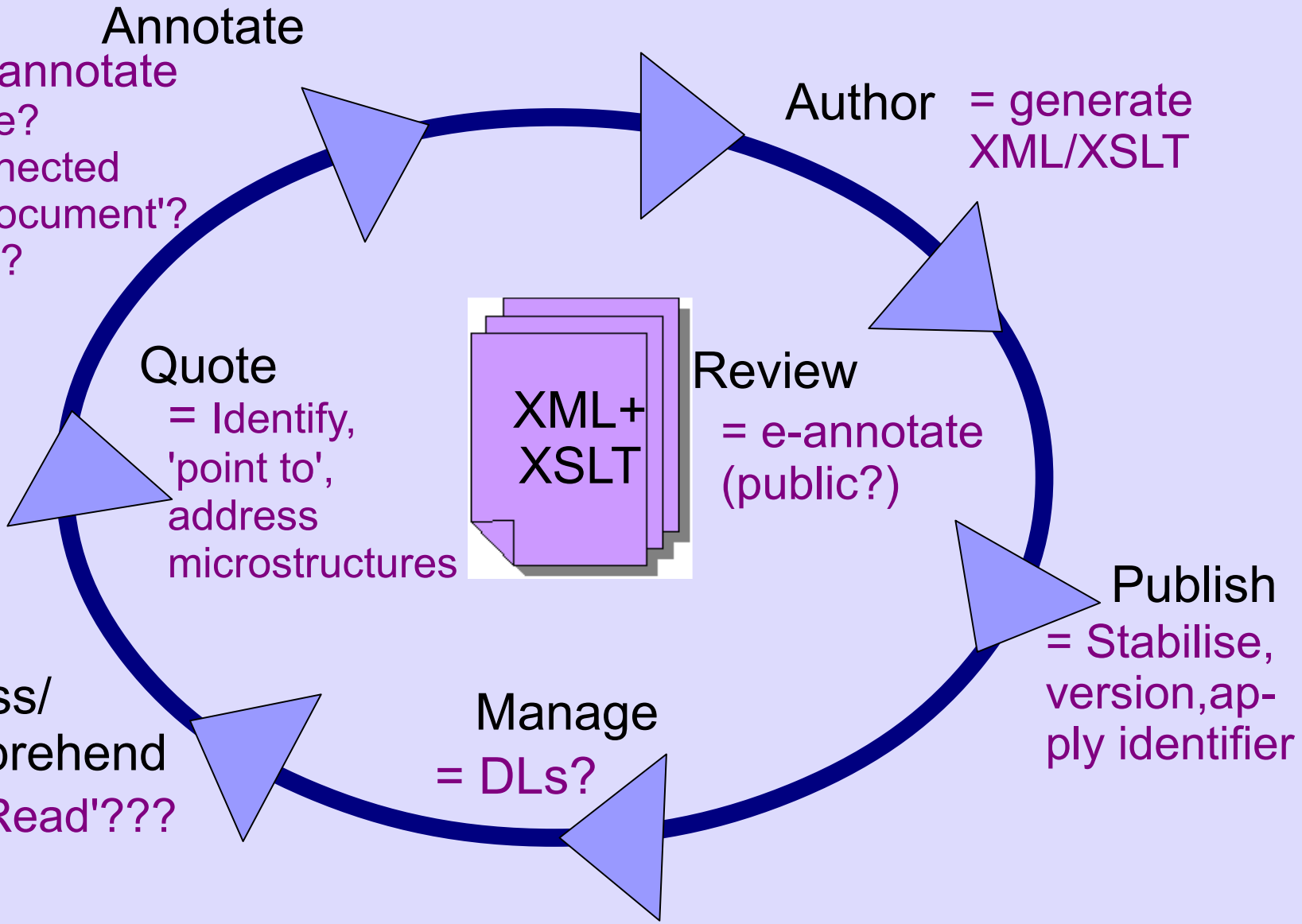
Scholarly Working Cycle
using traditional cultural techniques



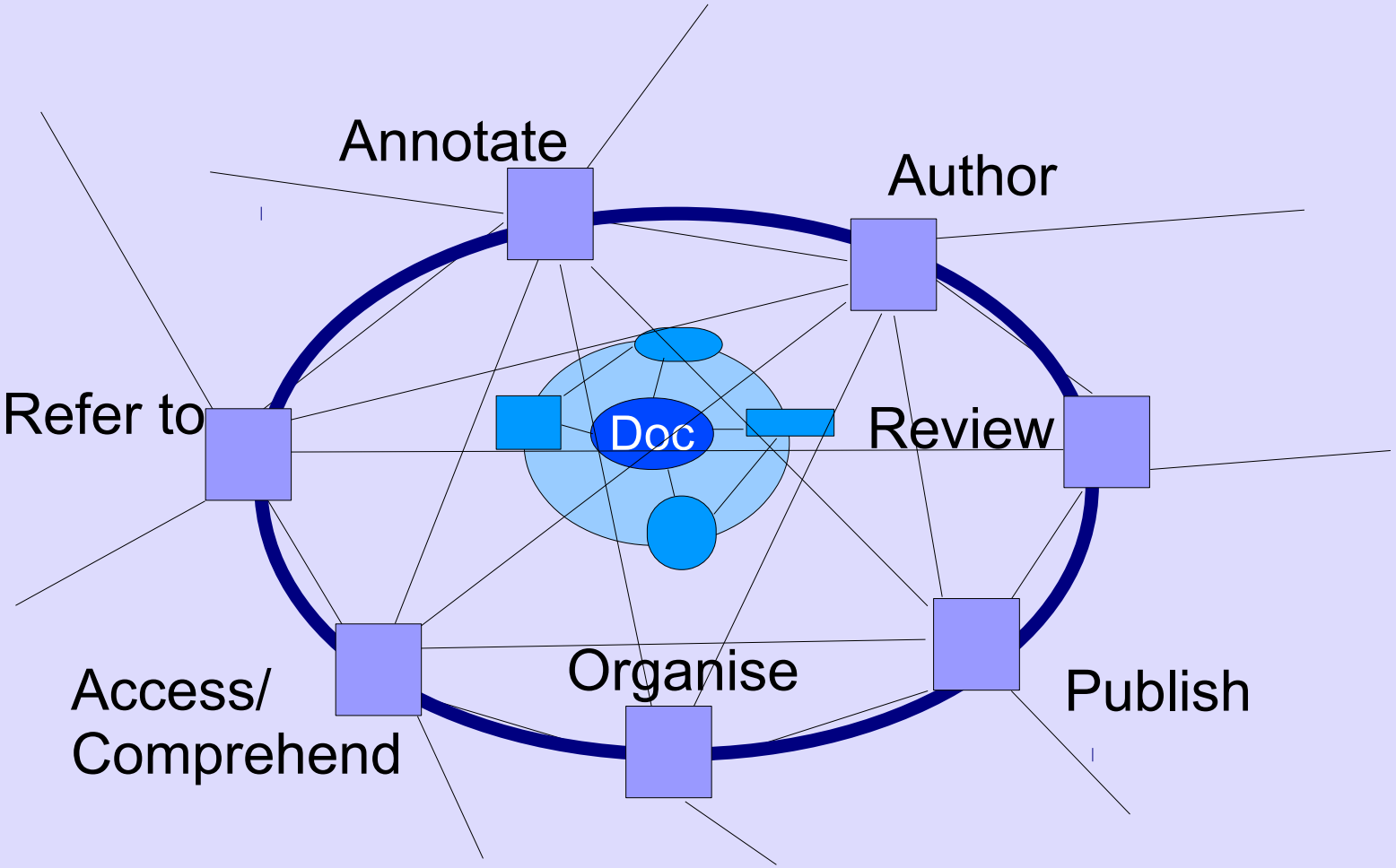
Scholarly Working Cycle
emulating traditional cultural techniques



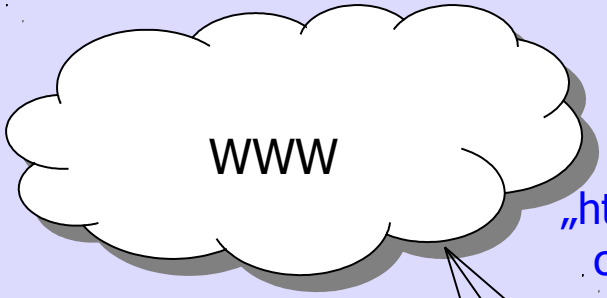
Scholarly Working Cycle: going digital



Scholarly Working Continuum: changing paradigms



Changing Scholarly Working Continuum:
the referencing example



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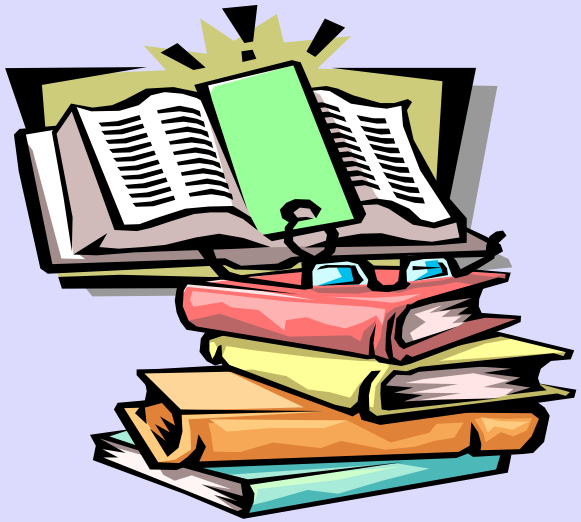

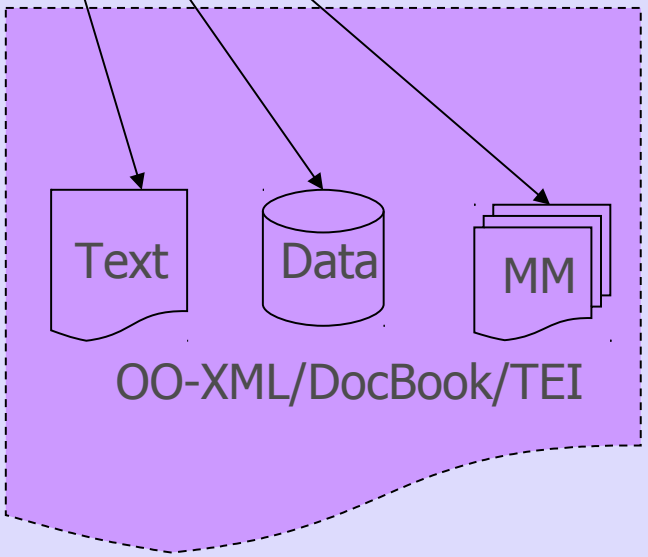

OSCW: ambitious aims ... and limited resources

"... create a research and publication infrastructure on the Web and an advanced e-learning system for the humanities.

The *research infrastructure* enables a de-localized community of specialists to work in a cooperative and cumulative manner and to publish the results of their work on the Internet.

The *e-learning system* unites research and education, and envisages not only knowledge transfer, but also the development and enhancement of critical thinking skills and of autonomous production of scientific contributions ..."

COST grant helps us to get together and to communicate and thus creates a co-operation basis

Synergies may be obtained from co-operation with DISCOVERY and other Hyper-related projects

Still, most efforts will rely on the limited resources of the partners

Hence a need

Standards Motivation I: 'buy' rather than 'make'

Enable OSCW for make or buy decisions that are viable given our resource limitations

We can afford only ***very*** limited 'make' scenarios

A vital requirement for 'buy' scenarios is standards compliance!

Standards Motivation II: Interoperability

Not everyone will use OSCW framework

OSCW will be part of a complex, distributed and heterogeneous collaboratory landscape

OSCW thus vitally needs to be interoperable

- technically
- functionally
- semantically

Interoperability is a critical condition for success and can only be built on standards on all three levels

Standards Motivation III: Persistency

How to make the web of scholarly work persistent over time?

Creating Persistency means much more than just long term preservation of bits & bytes: it is basically concerned with reuse and the specific conditions required to preserve usability ...

... not just of a single digital resource ...

... but of an entire web of citations and references!

Creating Persistency of E-Research results faces two issues

Make citations / references work in heterogenous environments and

Make them work over time

Persistency vitally depends on standards for object modelling and interaction with objects

What Standards on which level: Infrastructure and 'Functional Primitives'

Infrastructure: W3C standards!

Basic instances and their interaction (distinguish metadata and object level!):

- Objects: TEI P5 (?) MPEG 21 (?)
- Actors: LDAP/EduPerson (?)
- Interaction/Trust: SAML (Liberty vs. Shibbolleth)

Workflows: WFDL?

Functional Primitives

- Unsworth: “discovering, annotating, comparing, referring, sampling, illustrating, and representing”
- AHDS: “searching/querying, collating, collocating, concording, content analysis, parsing, stemmatics, stylometrics, topic detection and tracking, visual analysis/visualization, record linkages, inference and descriptive statistics”

Complex Functionality: ???

Standards for the 'WantedTools' I

Authentication

We should have an (digital signature?) authentication system to control the access to all the external webservices ...

=> standards are available (LDAP, SAML etc.), but what should be the granularity level of authorisation?

Search Engine

An XML search engine that is able to search in all the federated sites. It should be smart enough to understand at least TEI P5 and HNML as well as unstructured text.

=> Object modeling standard required first!

Image slicing tool

The team of philogists of HyperNietzsche used imageJ so far to create the coordinate lists for image maps. However it would be very practical for users to be able to do that on the web (Ajax?).

=> Object modeling standard required first!

Standards for the 'WantedTools' II & more

Rhizomes Generator

Develop a web service that, given the necessary input, generates rizhomes ...
=> Functional primitive definition required first!

Collation

Can we use Versioning Machine or a similar product for collation? If not, why not? If yes, how can we make it fully interoperable with the rest of the infrastructure? How can we make the integration transparent to users?
=> Functional primitive definition required first!

One last suggestion: Identifiers (remenber referencing?)

What entities do we actually identify?

In technical terms: files? Bits & bytes? Documents? Data? Locations? Text? Images?

In semantical terms: concepts? Information? Signs?

And what is the nature of the relation between identifier and object: Link? Signification? Description? Representation? Surrogate? Naming?

Only after having answered at least some of these questions you can make choices among DOI, URN and the rest

The Cultural Continuum

From 'storytelling' to 'writing', from the 'Scriptorium' to 'Print'

From desk research to 'e-research'

Machines may be 'happy' with sets of standards and protocols

Humans continue to need a social space for research interaction and for the exchange and aggregation of 'results'

Knowledge creation is much **more** than just an ever repeating circle of data assembly, processing and re-aggregation

Knowledge creation vitally depends on a cultural continuum